

## **HIGH-RESOLUTION AND HIGH-POWER ULTRASOUND METHOD AND DEVICE FOR SUBMARINE EXPLORATION**

### **ABSTRACT OF THE DISCLOSURE**

A method for underwater exploration which makes use of a parabolic transmitter (1) and a parabolic receiver (3), the transmitter (1) and the receiver (3) being both open at their lower side and immersed below the seawater surface. The electric breakdown discharge occurring between both electrodes (15) of the transmitter (1) generates a primary signal and a pulse which is called "cavitation bubble pulse." The method consists in enhancing the signal (23) produced by the implosion of the cavitation bubble, to the detriment of the primary signal (13"), by appropriately adjusting the value of the "spark gap" (distance  $d$  between the electrodes) so as to optimize the delay time ( $t$ ) and consequently the acoustic efficiency of the transmitter, by transferring the electrostatic energy to the bubble implosion signal.

60478909 v1

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number  
WO 2004/046757 A1

(51) International Patent Classification<sup>7</sup>:

G01V 1/157

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(21) International Application Number:

PCT/IT2003/000751

(22) International Filing Date:

19 November 2003 (19.11.2003)

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

RM2002A000581

19 November 2002 (19.11.2002) IT

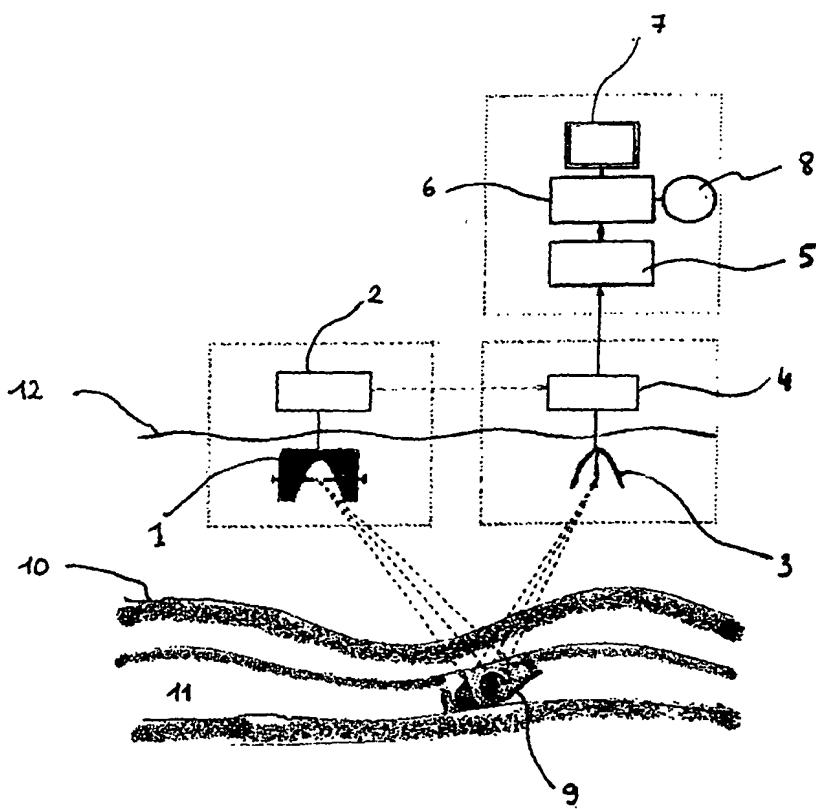
(84) Designated States (regional): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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[Continued on next page]

(54) Title: HIGH-RESOLUTION AND HIGH-POWER ULTRASOUND METHOD AND DEVICE, FOR SUBMARINE EXPLORATION



(57) Abstract: A method for underwater exploration which makes use of a parabolic transmitter (1) and a parabolic receiver (3), the transmitter (1) and the receiver (3) being both open at their lower side and immersed below the seawater surface. The electric breakdown discharge occurring between both electrodes (15) of the transmitter (1) generates a primary signal and a pulse which is called "cavitation bubble pulse". The method consists in enhancing the signal (23) produced by the implosion of the cavitation bubble, to the detriment of the primary signal (13''), by appropriately adjusting the value of the "spark gap" (distance d between the electrodes) so as to optimise the delay time (t) and consequently the acoustic efficiency of the transmitter, by transferring the electrostatic energy to the bubble implosion signal.



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- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designation US*
- *of inventorship (Rule 4.17(iv)) for US only*

**Published:**

- *with international search report*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

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